

Work Order ID 59428

Friday, June 04, 2010 9:24:31 AM



Page 1

Item ID: D3407-1

Accept



Setup Start



Revision ID:

Item Name: Stem

Stop



Start Date: 6/4/2010 Start Qty: 16.00



Cust Item ID:

Required Date: 6/10/2010 Req'd Qty: 16.00



Customer:

Reference:

Approvals:

Process Plan: H

Date: 10-6-04

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3407

Rev E

100

0.00



DOOSAN LATHE

Doosan

Memo

0.00

Doosan Lathe

1-Turn as per Folio FA596 Rev: AA & Dwg D3407 Rev: E □ 2-Deburr

JL 10/06/18 (16)

110

0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

JL 10/06/18

16

120

0.00



QC8- Inspect parts - second check

QC

Memo

0.00

Quality Control

JL 10/06/18

16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 59428

Friday, June 04, 2010 9:24:31 AM



Page 2

Item ID: D3407-1

Accept



Setup Start



Revision ID:

Item Name: Stem

Stop



Start Date: 6/4/2010 Start Qty: 16.00



Cust Item ID:

Required Date: 6/10/2010 Req'd Qty: 16.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

Identify as per dwg & Stock Location: _____

0.00



Packaging

Memo

0.00

Packaging

PART

10/6/21 (14)

140

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/06/22

ME 10-6-21

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, June 04, 2010 9:24:35 AM

Page 1

Work Order ID: 59428



Parent Item: D3407-1



Parent Item Name: Stem

Start Date: 6/4/2010

Required Date: 6/10/2010

Comments: IPP Rev:A 05.10.18 New issue KJ/EC
 IPP Rev:B Now on Doosan 08-05-14 JLM Verified By:DD
 IPP Rev:C 08-08-12 revE as per dwg (ecn 08-507) DD verified by:EC

Start Qty: 16.00

Required Qty: 16.00

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Qty per Kit	Total	Qty	Date	Status
M174R0.750		Purchased	No			100	f	52.8000	0.366	6.164211			
17-4 round bar .750													

Location

Loc Qty

Loc Code

MAT 48.8
 114488 48.8
 MAT030 4
 112998 4

7.4 JL 10/06/17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	59428
Description: Tow Ring		Part Number:	D3407-1
Inspection Dwg: D3407 Rev: E		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ **First Article**
☐ **Prototype**

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.063	+/-0.010	.070	✓			
1/4-28 UNF	Max: 0.2668 Min: 0.2635	.266	✓			
Major Ø	Max: 0.249 Min: 0.2425	.244	✓			
Ø0.625	+/-0.010	.626	✓			
Ø0.363	+/-0.010	.362	✓			
Ø0.750	+/-0.010	.749	✓			
R0.100	+/-0.010	.100	✓			
0.470	+/-0.010	.469	✓			
0.500	+/-0.010	.501	✓			
3.250	+/-0.010	3.250	✓			
4.250	+0.000/-0.010	4.245	✓			
5.270	+/-0.010	5.271	✓			
0.150	+/-0.010	.154	✓			
0.550	+/-0.010	.556	✓			
0.625	+/-0.010	.625	✓			
0.250	+0.010/-0.000	.253	✓			

Measured by:	SL	Audited by:	DT	Prototype Approval:	N/A
Date:	10/06/17	Date:	10/06/18	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.09.19	New Issue	KJ/JLM	
B	07.07.18	Tolerances for diameters updated per Machinists	KJ/JLM	
C	08.05.14	Dimensions updated per Dwg Rev D	KJ/JLM	
D	08.10.07	Dimensions updated per Dwg Rev E	KJ/DD	

W/O:		WORK ORDER CHANGES					
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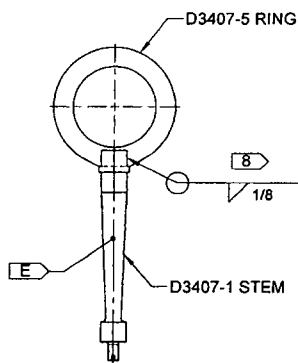
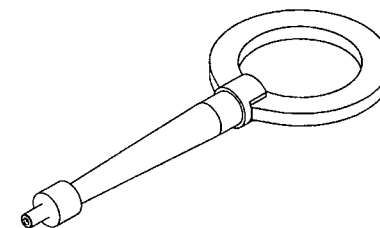
NOTE: Date & initial all entries

QTY -041	QTY -043	QTY -045	PART NUMBER	DESCRIPTION
X			D3407-041	TOW RING
	X		D3407-043	TOW RING
		X	D3407-045	TOW RING
1			D3407-1	STEM
	1		D3407-3	STEM
1	1	1	D3407-5	RING
		1	D3407-7	STEM

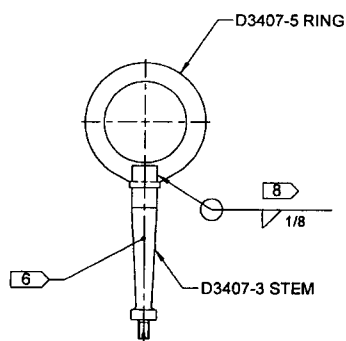
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 39428

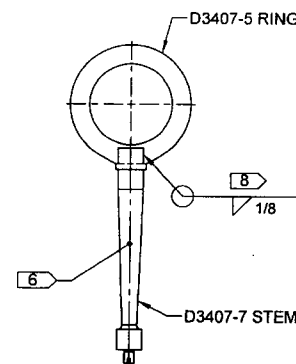
B810-6-04



D3407-041 TOW RING



D3407-043 TOW RING



D3407-045 TOW RING

RELEASED

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3 (EXCEPT THREADS)
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3407-XXX" USING BLACK FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: D3407-041 - 0.60 lbs, D3407-043 - 0.53 lbs, D3407-045 - 0.61 lbs
- 8) WELD PER DART QSI 004 ON ALL EDGES BETWEEN STEM AND RING

E	ADD D3407-045 (ZN B2-1, D8-1); ADD D3407-7 (ZN B6-5); REVISED NOTE 8 TO ADD IDENTIFICATION (ZN A5-1); REASON: PRODUCTION FACILITY	PH	08.07.23
D	D3407-1/3 SLOT WAS ROUND NOW FLAT FOR ASSEMBLY WITH D3407-5 (ZN C2-2, C2-3); D3407-5 WAS ROUND NOW FLAT ON ONE END FOR ASSEMBLY WITH D3407-1/3 (ZN B6-4); REASON: PRODUCTION FACILITY	PH	08.04.07
C	-1/3 LONGER FOR FIT W/WASHER	CP	05.09.09
B	UPDATE DIAMETER, THREAD CLASS ADDED	CP	05.06.17
A	NEW ISSUE	CP	05.03.16
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.07.23		

DART AEROSPACE USA, INC.
PORT HADLOCK, WA

DRAWING NO. D3407
TITLE TOW RING
REV. E
SHEET 1 OF 5
SCALE NTS

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Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

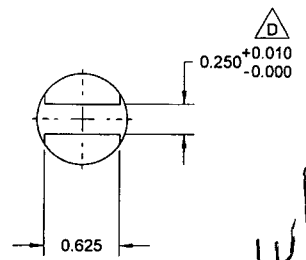
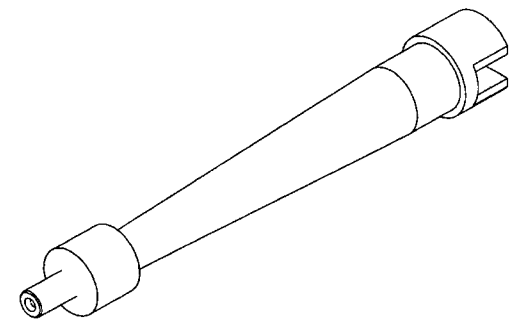
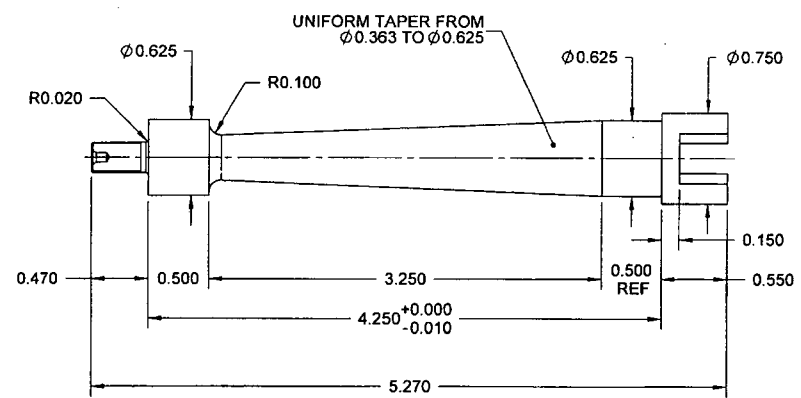
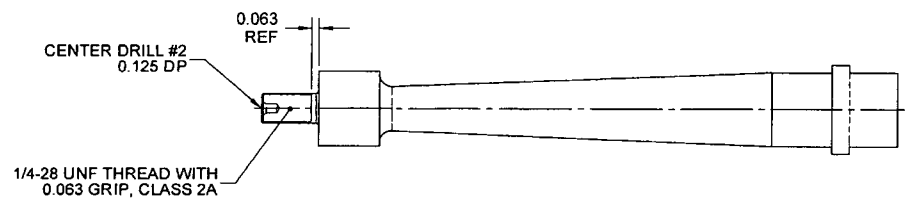
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

4-45



w/o 59428

D3407-1 STEM

RELEASED
08-07-23

- NOTES:
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.33 lbs

DESIGN		DART AEROSPACE USA, INC.	
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CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D3407	SHEET 2 OF 5
APPROVED		TITLE	SCALE
DE APPR.		TOW RING	NTS
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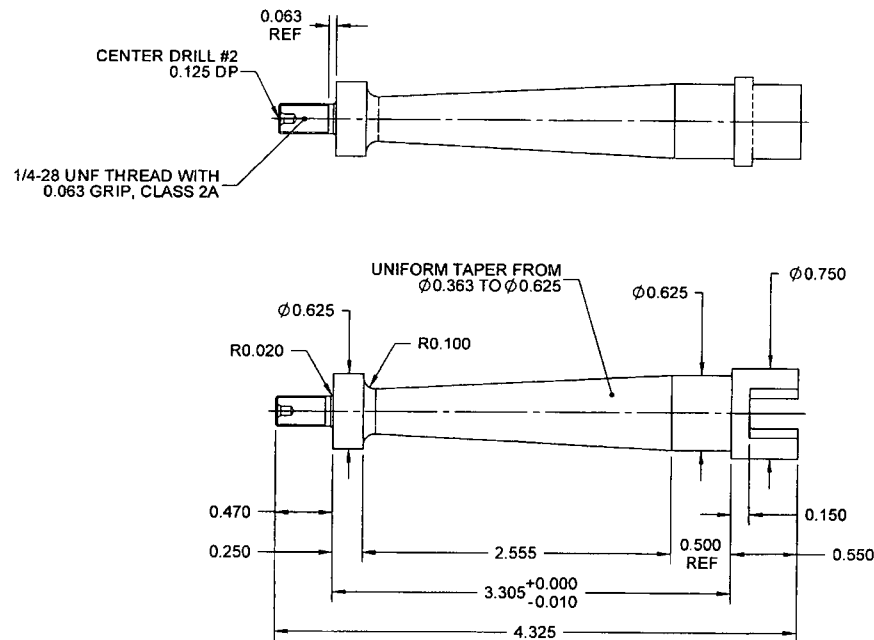
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

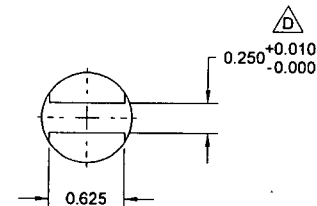
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3407-3 STEM



w/0 59428

RELEASED
08-07-23

- NOTES:**
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.27 lbs

DESIGN	DP	DART AEROSPACE USA, INC.	
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CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D3407	SHEET 3 OF 5
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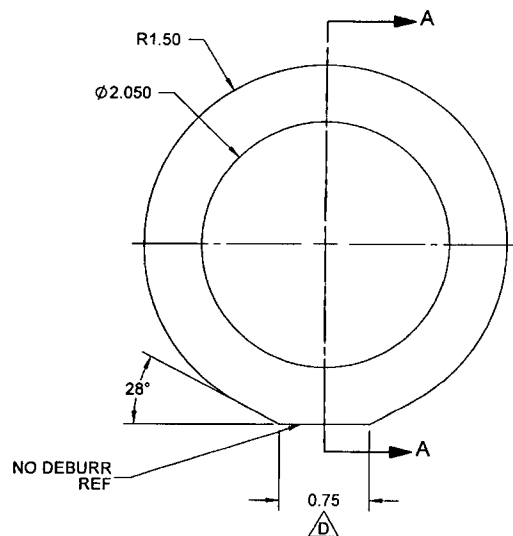
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

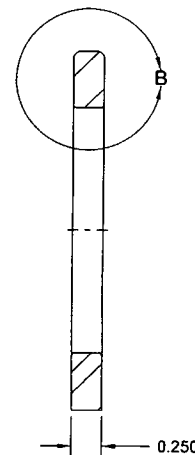
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

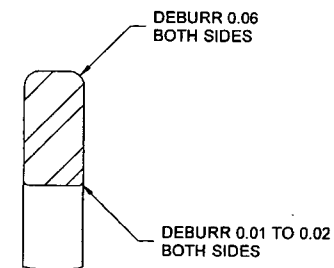
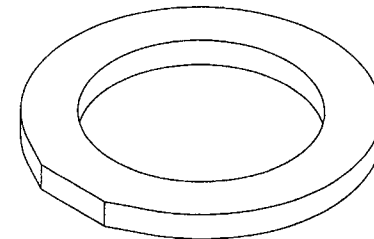
NOTE: Date & initial all entries



D3407-5 RING



SECTION A-A







**DETAIL B
SCALE 2X**

RELEASED
08-06-01-14

- NOTES:**
- 1) MATERIAL: 17-4 PH SS BAR PER AMS 5604/5643 (REF. DART SPEC M17-4-B)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.27 lbs

w/o 59478

DESIGN	92	DART AEROSPACE USA, INC.	
DRAWN	JE	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D3407	SHEET 4 OF 5
APPROVED		TITLE	SCALE
DE APPR.		TOW RING	NTS
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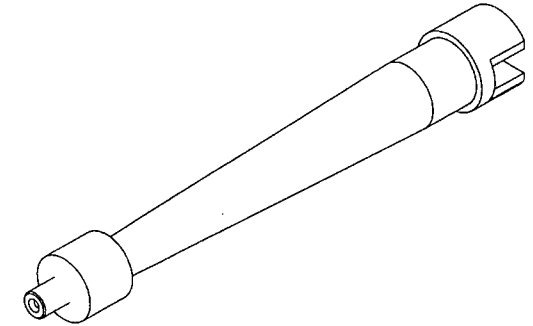
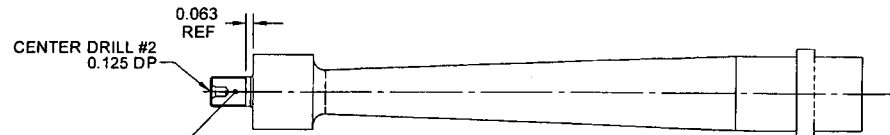
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

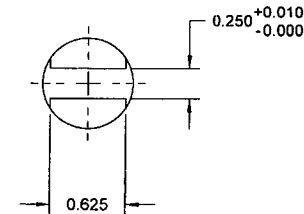
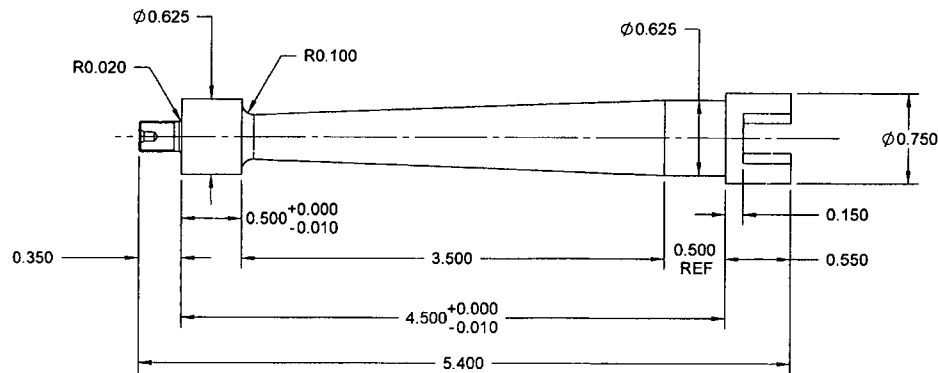
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1/4-28 UNF THREAD WITH
0.063 GRIP, CLASS 2A





D3407-7 STEM

w/0 59428

RELEASED

- NOTES:**
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.34 lbs

DESIGN	AJS	DART AEROSPACE USA, INC.	
DRAWN	JP	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D3407	SHEET 5 OF 5
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